

# PATENT ABSTRACTS OF JAPAN

(11)Publication number : 09-133333

(43)Date of publication of application : 20.05.1997

(51)Int.Cl.

F23G 5/44  
F23G 5/00  
F23G 5/00  
F23M 5/00

(21)Application number : 07-316137

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(22)Date of filing : 08.11.1995

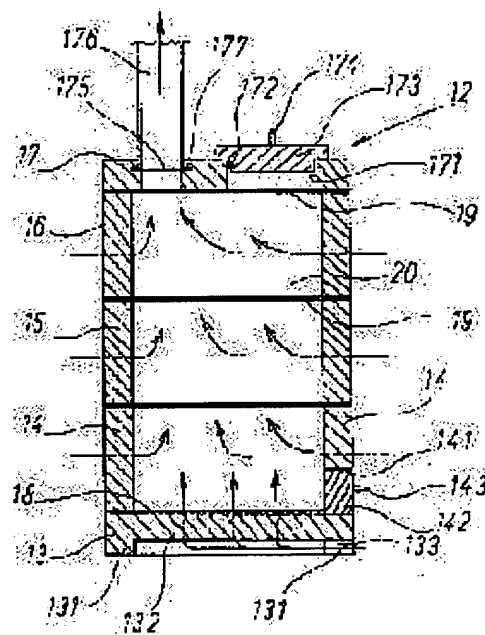
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## (54) INCINERATOR

### (57)Abstract:

**PROBLEM TO BE SOLVED:** To achieve a reduction in the number of parts, easier transportation with a lighter weight and a lowering of cracking generated by thermal expansion by keeping a wall surface of a combustion chamber breathe to allow raising of combustion efficiency remarkably.

**SOLUTION:** A about 0.5-1 pt.wt glass fiber is added as a binding reinforcement material to a mixture of almost equal pt.wt of zeolite and pumice and cylinder wall bodies 14, 15 and 16 with a void of at least about 5% are combined free to assemble or disassemble using a cement paste of alumina cement to form a breathing cylindrical combustion chamber 20. A garbage dump port 171 and a stack 176 are formed at an upper part of the combustion chamber and an ash rake out port 141 at a lower part of the combustion chamber 20.



## LEGAL STATUS

[Date of request for examination]

[Date of sending the examiner's decision of rejection]

[Kind of final disposal of application other than the examiner's decision of rejection or application converted registration]

[Date of final disposal for application]

[Patent number]

[Date of registration]

[Number of appeal against examiner's decision of rejection]

[Date of requesting appeal against examiner's decision of rejection]

[Date of extinction of right]

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**CLAIMS**

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[Claim(s)]

[Claim 1] As opposed to the coarse aggregate which becomes as more [ pumice / a zeolite and / section / abbreviation same weight / pumice ] rates a little After connecting the glass fiber of about 0.5 to 1 weight section extent and adding as reinforcing materials, While making into connector material the cement paste which consists of refractory cement, forming the block molding object of the porosity which serves as about 5% of voidage at least, combining these block molding object, enabling a free assembly overhaul and making with a permeability tubed combustion chamber body The incinerator which forms dust input port and chimney-stack opening in the upper part of this permeability tubed combustion chamber body, and comes to form \*\*\*\*\* in this lower part, respectively.

[Claim 2] As opposed to the coarse aggregate which becomes as more [ pumice / a zeolite and / section / abbreviation same weight / pumice ] rates a little After connecting the glass fiber of about 0.5 to 1 weight section extent and adding as reinforcing materials, Make into connector material the cement paste which consists of refractory cement, and the short tubed block molding object of the porosity which serves as about 5% of voidage at least is formed. While combining a these short tubed block molding object, enabling a free assembly overhaul and making with a permeability tubed combustion chamber body, the above-mentioned short tubed block molding object is another object. The incinerator which comes to combine with this lower part the short tubed precast concrete armor unit molding object which the above-mentioned short tubed block molding object is another object again in the upper part of this tubed combustion chamber body made from aeration about the top-cover molding object which has dust input port and chimney-stack opening, and has \*\*\*\*\*.

[Claim 3] The incinerator according to claim 2 which comes to form only a top-cover molding object in the thing made from non-permeability concrete.

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**DETAILED DESCRIPTION**

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[Detailed Description of the Invention]

[0001]

[Objects of the Invention] It is a thing about the simple incinerator for installing this invention in the yard at ordinary homes etc., and carrying out incineration disposal of the inflammable dust easily. Like a metal thing Even if it carries out oxidation corrosion by combustion of dust, or it carries out heating and carrying out dilatation deformation etc., does not cause trouble to endurance and it moreover compares with the incinerator made from concrete to old, while portability and combustion efficiency nature are improved The simple incinerator which consists of new structure which becomes possible [ controlling generating of harmful flue gas and bleedoff as much as possible ] is offered.

[0002]

[Description of the Prior Art] In recent years, city waste disposal problems are big social problems, and many recycle which reuses non-burnable trash, such as an empty can and an empty bottle, as a resource, garbage disposal equipments which enable processing of a kitchen garbage by domestic by utilization of a microorganism etc. are increasingly used in the actual condition which is insufficient of the facilities for refuse disposal. It is in such the actual condition and incineration of the dust for every home using a traditional home incinerator is performed at the home where the city section is left and it lives in a single house. Incineration of such dust is performed using the incinerator made from a refractory concrete, and the incinerator made from a griddle. The incinerator 1 made from a refractory concrete shown in the front view of the incinerator of drawing 6 and the sectional side elevation of the incinerator of drawing 7 mixes the aggregates, such as sand and ballast, to the cement paste made because the concrete components which constitute that body mix water to the alumina cement known as refractory cement, and is created by slushing this freshly mixed concrete into a mold, and recuperating oneself.

[0003] The incinerator 1 to old [ this ] is equipped with the rectangular-head tabular base 2. In the upper part of this base 2 The lower barrel wall object 3 formed in tubed [ which suits the profile configuration of the base 2 ] is laid, and \*\*\*\*\* 31 for raking out the ashes after incineration from the inside of an incinerator 1 is formed in the peripheral surface part corresponding to the front face of this lower barrel wall object 3 by excising a part of joint with the base 2 in the shape of a rectangle. And fitting of the brick lid 41 formed in the rectangle box-like corresponding to the opening configuration of \*\*\*\*\* 31 is carried out to this \*\*\*\*\* 31, the ends of the handle 43 which bent and formed the iron bar in the lateral-surface center section of this brick lid 41 are implanted in it, and the bleeder 42 of a triangle-like cross section is formed in the central lower part. Inside the lower barrel wall object 3 with which such a circumferential wall was formed, it carries out bending two or more iron bars etc., the grate 44 formed by carrying out combination welding is inserted in the shape of a grid, it is, and the aeration volume section 71 for oxygen supply is constituted in the lower part of a combustion chamber 7.

[0004] The CHUBU ENGINEERING CORPORATION barrel wall object 5 with which the plane view configuration was formed in the same configuration as the lower barrel wall object 3 is laid in the upper part of the lower barrel wall object 3 by the laminating condition, and the up barrel wall object 6 of the same configuration as the CHUBU ENGINEERING CORPORATION barrel wall object 5 is further accumulated on the upper part of the CHUBU ENGINEERING CORPORATION barrel wall object 5. In this way, the top plate 8 is formed in the upper part of the combustion chamber 7 of the incinerator 1 constituted by having accumulated the barrel wall objects 3, 5, and 6 on three steps, the dust input port 82 penetrated in the thickness direction which is the vertical direction ahead of this top plate 8 is formed, and this dust input port 82 is equipped with the closing motion lid 9. It is covered the structure of the level difference section 92 being formed in a bottom edge, hiding a part into dust input port 82, and preventing a slipping motion with the closing motion lid 9, and the handle 93 which bent the iron bar with which the end face section was laid underground, and was formed is formed in the up center section. Furthermore, the exhaust port 83 is formed in the back

of a top plate 8 so that it may penetrate in the vertical direction. In this exhaust port 83, the chimney stack 10 extended up has fixed the flange 101 formed in the base in the condition of laying under the thick circles of a top plate 8. In addition, the handle 43 which fixed on the above-mentioned brick lid 4, the handle 93 prepared in the closing motion lid 9, and the flange 101 prepared in the chimney stack 10 have fixed in one by being fabricated in the condition of having been inserted to the predetermined location, in case each base slushes freshly mixed concrete into a mold.

[0005] In incinerating dust using the incinerator 1 to old [ which was constituted as mentioned above ], the dust which moves the closing motion lid 9 and is first incinerated from dust input port 82 is thrown in on a grate 44, and it burns as a pilot flame, cheap wastepaper etc. is lit, and it supplies this. It consists of air flowing through the bleeder 42 of the brick lid 4 from lower \*\*\*\*\* 31, and supplying oxygen in a combustion chamber 7 so that combustion may be urged. The burning dust is held by the grate 44 in the condition of having risen to surface in the halfway section of a combustion chamber 7, as shown by the arrow head in drawing 7 through the aeration volume section 71, it is constituted so that air may spread round the whole, and the smoke generated by combustion of dust passes a chimney stack 10, it flows into the outside of an incinerator 1 and is exhausted.

[0006] Therefore, although it extracts and removes the brick lid 4 from \*\*\*\*\* 31 and it is made to make the air of a large quantity flow when the old incinerator 1 is lit in the condition of throwing in much dust at once and filling a combustion chamber 7 since it needs much oxygen for combustion. Thus, even if it makes the amount of supply of air increase, the dust in a combustion chamber 7 may be in an incomplete combustion condition. When smoke, such as nonflammable gas, does not occur mostly, or efficient dust incineration of fire going out on the way etc. is not able to be performed and the bleeder part of \*\*\*\*\* 31 grade was enlarged, it was what new inconvenience, such as smoke flowing out of this part, or a wind flowing, and extinguishing fire, produces.

[0007] Thus, the artificer to whom incinerating much dust efficiently paid its attention to the fault of the incinerator 1 of the difficult actual condition at once. The time amount which dust incineration takes by improving this to what burns efficiently can be shortened, and an incineration activity can be easily done also in a busy life. Furthermore, research of the efficient incinerator 1 which can control generating of the harmful gas by incomplete combustion etc. by efficient combustion. While starting development and passing easily the air which flows into the wall surface of a combustion chamber 7 inside as a result of various trial-and-error. The conclusion that it is a very effective policy developing the wall surface which prevents that nonflammable gas, a smell, etc. flow out outside, and makes a good combustion condition is reached, and it succeeds in implementation-ization of the incinerator made from a refractory concrete which added at last the new engine performance which was not seen to the old incinerator. Suppose that the configuration is explained in full detail with reference to a drawing with the example representing the incinerator containing the completely new permeability aggregate completed by applying to below the concrete with which the invention-in-this-application person succeeded in development at last made from a refractory concrete.

[0008]

[Elements of the Invention] The incinerator containing the permeability aggregate of this invention made from a refractory concrete makes the following configurations the summary fundamentally so that I may be clearly understood also from the example representing this invention shown in a drawing. Namely, connect the glass fiber of the weight section which serves as about 0.5 - 1% of rate to the coarse aggregate which becomes as the abbreviation same weight section in a zeolite and a pumice, and it adds as reinforcing materials. Knead the cement paste which consists of refractory cement, and the block molding object of the porosity used as about 5% of voidage is formed. It is the incinerator which constitutes a permeability tubed combustion chamber body combining these block molding object, carries out opening of dust input port and the chimney-stack opening to the upper part of a permeability tubed combustion chamber body, and comes to form \*\*\*\*\* in the lower part.

[0009] In addition, by building reinforcement into a block molding object if needed, reinforcement can be improved and endurance can be raised. moreover, the configuration of reinforcement can secure good endurance with having constitute so that what construct two or more reinforcement in the condition of accomplish the shape of a grid inside the block molding object which form a tubed combustion chamber, and intersect a lengthwise direction and a hoop direction, and a continuum like a wire gauze might be made inherent in the thick section etc. As the concrete blending ratio of coal of the zeolite of a block molding object, a pumice, glass fiber, and refractory cement. The zeolite 30 weight section, the pumice 30 weight section, the glass fiber 3 weight section, The optimal, when considering as the refractory-cement 40 weight section raises fire resistance efficiency and endurance, although it is necessary to secure at least 5% or more of voidage in order to supply air required for a combustion chamber, the voidage of a block molding object. By setting it as about 7 - 8% of these voidage, it is checking that the permeability optimal for combustion can be secured now.

[0010] As a more concrete configuration, in furthermore, more [ a little ] rates than a zeolite and this zeolite. Or the glass

fiber adjusted to the weight section of about 0.5 - 1% of rate is added to the coarse aggregate which comes to mix the pumice of the abbreviation same weight section. Knead the cement paste which consists of refractory cement, and the short tubed block molding object of the porosity which serves as about 5% of voidage at least is formed. A permeability tubed combustion chamber body, and nothing and a short tubed block molding object are another objects combining a these short tubed block molding object. The above-mentioned short tubed block molding object is another object again in the upper part of this permeability tubed combustion chamber body about the top-cover molding object which has dust input port and chimney-stack opening, and it can consider as the incinerator which comes to combine with the lower part the short tubed precast concrete armor unit molding object which has \*\*\*\*\*.

[0011] It shall form in the thing of the product [ top plate / the outside where it is desirable to divide into the size which is not necessarily limited to it although about 2-4 steps are suitable for the laminating number of stages of a short tubed block, and is suitable for haulage if needed, and ] made from non-permeability concrete, and should be made to make good the inflow of stability and the air which strengthens and flows into a combustion chamber for the flue gas suction force from a chimney stack. In addition, lidding in \*\*\*\*\* or the input port of dust is possible, and, of course, closing motion accommodation of a lid can be performed according to the combustion condition of dust, or the external weather. The configuration of the incinerator included by this invention carries out to enabling it to grasp more concretely and clearly by explaining hereafter the example shown in a drawing in full detail.

[0012]

[Example 1] First, an example of the incinerator which consists of most typical structure of this invention is shown in the drawing 1 perspective view. This fundamental incinerator 12 is constituted as shown in the front view of the incinerator 12 of drawing 3 , and the sectional side elevation of the incinerator 12 of drawing 4 , and that refractory-concrete wall surface is formed with the cross-section structure shown in drawing 2 . An incinerator 12 is equipped with the top plate 17 as the base 13, the barrel wall objects 14, 15, and 16, and a top-cover molding object, is constituted, and all of these main parts make fireproof cement paste connector material, and it consists of the refractory concrete which mixed the pumice with the zeolite as the aggregate.

[0013] As for a zeolite and a pumice, as coarse aggregate of the barrel wall objects 14, 15, and 16 formed in the grain size of about 10-40mm, and the thickness of 100-150mm, it is desirable to consider as an about 15-30mm thing. A zeolite is one of the very high mineral resources of a few self-sufficiency rates in our country. Although it is going to use the property effectively as an incinerator since it has innumerable a cavity of several angstroms - 10A and an operation of moisture absorption and bleedoff of moisture, absorption of gas, the deodorization effectiveness, etc. is done so by change of environments, such as temperature of the external world, and an atmospheric pressure, in the crystal structure Since decomposition by heat advances in itself, concomitant use by the predetermined rate with a pumice becomes very important. 40-kind weakness, such as natural, for example, the zeolite from Yamagata Sasaya etc., is reported, a composite thing goes up also to hundreds of kinds, and, as for the zeolite with the above unique physical properties, especially its baking zeolite is effective.

[0014] While mixing with grain size, such as abbreviation, and the pumice of the abbreviation same weight section and using as coarse aggregate the zeolite which adjusted grain size as mentioned above, the glass fiber of the rate of about 0.5 to 1 weight section extent is added as reinforcing materials to this coarse aggregate, and voidage forms after that the block molding object of the porosity it was made to become about 7 - 8% the optimal about at least 5% with the cement paste which consists of refractory cement. In addition, what is necessary is for refractory cement to accept a season, a weather condition, etc., and for a value to choose and just to adopt a water cement ratio from within the limits around 40 - 60% suitably, before and after 50% of abbreviation, using Portland blast furnace cement excellent in alumina cement or thermal resistance. Moreover, as the concrete blending ratio of coal of the above-mentioned zeolite, a pumice, glass fiber, and refractory cement, ideal reinforcement, endurance, and thermal resistance are securable by setting up with the zeolite 30 weight section, the pumice 30 weight section, the glass fiber 3 weight section, and the refractory-cement 40 weight section.

[0015] Moreover, the voidage of the opening section of the block molding objects 12-17 If it is desirable to set up to about 7 - 8% and it raises voidage across this range, while it will become quite difficult to acquire sufficient endurance as an incinerator 12 used at ordinary homes The attraction effectiveness of a chimney stack can weaken, the problem that smoke will be discharged will be produced from these opening section in response to the effect of the flow of the open air, and it is not desirable. Furthermore, in order to supply sufficient air needed for the perfect combustion of dust at a combustion chamber, an invention-in-this-application person is already check ending about it being required to secure at least 5% or more of voidage.

[0016] Furthermore, although high reinforcement is secured by having added the glass fiber which is not illustrated into the block molding object 12 - 17, as shown in the sectional view shown in drawing 2 , endurance can be further

improved by reinforcing with the reinforcing materials who constructed the reinforcement which is not illustrated outside wire gauze 31a or reinforcement in the shape of a grid near [ thick ] a center section. In addition, in case cement paste is made, if there is need, the cement paste colored the color which carries out optimum dose mixing beforehand at cement, and asks for the well-known coloring agent for cement can also be used.

[0017] Like the above, it is the top plate 17 as the base 13, the barrel wall objects 14, 15, and 16, and a top-cover molding object, respectively, and the produced block molding object kneads all the above-mentioned ingredients, it is slushed into a cement pattern and manufactured as a main component part of an incinerator 12 by fabricating and recuperating oneself. An outline diameter is formed in about 90cm, and the base 13 is formed in the configuration in which is equipped with the leg 131 and a base 132 surfaces from the ground. Under the present circumstances, the leg 131 For example, it is formed in the protruding line of the shape of high [ , such as having projected downward in the periphery partial lower part of the base 13 formed circularly, ], the free passage opening 133 is formed in anterior part, and it changes, and has the structure of securing the wall surface in which aeration is possible in the vertical direction, in the center section of the above-mentioned base 132 through this free passage opening 133.

[0018] Moreover, the thickness dimension which forms the external wall surface corresponding to the outline configuration of the plane view circle configuration of the base 13 is formed in tubed [ which is about 10cm ], and the low-ranking barrel wall object 14 is set as height of about 40cm, and is formed in the front lower part by \*\*\*\*\*'s 141 constituting the shape of a rectangle and excision disconnection being carried out. The closeout block 142 which was formed in \*\*\*\*\* 141 so that an opening configuration might be closed, and was formed from the object which has the permeability manufactured from the cement paste kneading object containing a zeolite, a pumice, etc. or concrete without the usual permeability, brick, etc. can be equipped with a handle 143, and can be established, and the ashes deposited on the base 132 of the base 13 can be raked out now.

[0019] Between the margo-inferior section and the base 13, the asbestos packing 18 to which a plane view configuration constitutes the shape of an abbreviation C typeface is put, and the open C typeface-like part is arranged so that it may correspond to \*\*\*\*\* 141. It is constituted so that it may prevent that the smoke and gas at the time of combustion flow out of a part for the joint of the base 13 and the low-ranking barrel wall object 14 outside by this asbestos packing 18. It is set as the same outer diameter and this thickness dimension, and the barrel wall object 15 of the medium formed in the shape of a cylindrical shape in height of about 40cm puts between the upper part of the low order barrel wall object 14 the annular asbestos packing 19 formed so that an outer diameter and a bore might be in agreement with the barrel wall objects 14 and 15, and is accumulated on it. Furthermore, the barrel wall object 16 of the high order of the same configuration same dimension puts the asbestos packing 19 of the same configuration as an above-mentioned thing between the upper part of the barrel wall object 15 of a medium, and is accumulated on it, and the combustion chamber 20 is formed with the barrel wall objects 14, 15, and 16 of a total of three high orders, a medium, and low order.

[0020] The top plate 17 as a disc-like top-cover molding object is accumulated on the upper part of the barrel wall object 16 of a high order in the condition of putting the asbestos packing 19 of the same configuration as the above-mentioned thing. To the flank before this top plate 17 Opening is carried out to the shape of a square, and the input port 171 of the dust penetrated in the thick direction is equipped with the closing motion lid 173 which equips this dust input port 171 with the level difference section 172 corresponding to the inner hull configuration of input port 171, and fits into it in the vertical direction. The end face section of the handle 174 which bent the iron bar and was formed is implanted in the top-face center section of the closing motion lid 173. This closing motion lid 173 consists of an object which has the permeability manufactured from the cement paste kneading object containing a zeolite and a pumice, concrete, brick without the usual permeability, etc.

[0021] Opening of the exhaust port 175 penetrated in the thick direction of the vertical direction is carried out to the back of a top plate 17, and the base of the chimney stack 176 formed by carrying out sheet metal work of the griddle has fixed in this exhaust port 175. The flange 177 for immobilization is formed in the base of this chimney stack 176, and by inserting this flange 177 simultaneously at the time of shaping of a top plate 17, after the cure, it is constituted so that it may be fixed to a top plate 17 and one and may be completed.

[0022] Since the incinerator 12 constituted as mentioned above has high permeability in the base 132, the barrel wall objects 14, 15, and 16, and top plate 17 of the base 13 surrounding a combustion chamber 20, even if it is the case where the grate which was indispensable for the old incinerator is abolished, it can improve combustion efficiency by leaps and bounds. In addition, by considering as the product made from non-permeability concrete which produced only the top plate 17 as a top-cover molding object using the aggregate of the different usual refractory cement (alumina cement or Portland blast furnace cement) and the sand from other components, or ballast As a result of being able to lose the runoff close of the open air from a top plate 17, especially runoff, the flame accompanied by the flue gas going up It will be chiefly drawn in by the chimney stack 176, the attraction effectiveness will increase, installation of the

open air from the barrel wall objects 14, 15, and 16 is promoted, the supply of oxygen to the interior of an incinerator is stabilized, and it becomes possible to raise combustion efficiency.

[0023]

[Example 2] Other examples of the incinerator of this invention shown in the sectional side elevation of the incinerator 21 of drawing 5 The whole is formed in rectangle box-like and changes. The incinerator 21 A plane view configuration is equipped with the base 22 formed in the shape of a square, and the top plate 26 as the barrel wall objects 23, 24, and 25 accumulated on this base 22, and a top-cover molding object, and changes. These main parts add glass fiber to the coarse aggregate which carried out almost same amount mixing of a zeolite and the pumice, and cast and produce the kneading object which made connector material further the cement paste which consists of refractory cement.

[0024] the mixing ratio of each ingredient of these block molding objects 21-26 -- rates are the zeolite 30 weight section, the pumice 30 weight section, the glass fiber 3 weight section, and the alumina cement 40 weight section as refractory cement, and after kneading on this condition, specifically, they are cast so that voidage of a molding object may be made into about 7 - 8%. After mixing the zeolite and pumice which adjusted grain size by the above-mentioned ratio, carrying out optimum dose addition of the glass fiber and mixing, it kneads with fireproof cement paste, and it slushes into the mold of the base 22, the barrel wall objects 23, 24, and 25, and a top plate 26, and the main component parts of the incinerator 21 of 7 - 8% of voidage are manufactured by fabricating and recuperating oneself. In addition, other well-known refractory cement, such as Portland blast furnace cement, can also already be used for refractory cement. Moreover, a season, the weather condition for every district, etc. can be accepted, and a value can be suitably chosen and used for the water cement ratio in the range around 40 - 60%.

[0025] The base 22 is formed by plane view in the shape of [ whose one side is about 90cm ] a square, and it is formed in the configuration in which is equipped with the leg 221 and a base 223 surfaces from the ground. The leg 221 It is formed in the protruding line which projected downward in the periphery partial lower part of the base 22, the free passage opening 224 is formed all around, and it changes, and has the structure of securing the structure in which aeration is possible in the vertical direction, in the center section of the above-mentioned base 223 through these free passage openings 224. Moreover, the thickness dimension which forms the external wall surface corresponding to the outline configuration of the shape of a plane view square of the base 22 is formed in tubed [ which is about 10cm ], and the low-ranking barrel wall object 23 is set as height of about 40cm, and is formed in the front lower part by \*\*\*\*\*s 231 constituting the shape of a rectangle and excision disconnection being carried out.

[0026] The closeout block 232 which was formed so that an opening configuration might be closed, and was formed from the object which has the permeability manufactured from the cement zeolite kneading object or concrete without the usual permeability, brick, etc. can equip \*\*\*\*\* 231 with a handle 233, and can be formed in it, and the ashes deposited on the base 223 of the base 22 can be raked out now from this \*\*\*\*\* 231. The convex engagement edge 234 where the periphery section projects is formed in the margo-inferior section of the low order barrel wall object 23 over the perimeters other than the part corresponding to \*\*\*\*\* 231. the engagement convex which it projects and makes into the upper part of the base 22 corresponding to the inside of this engagement edge 234 so that it may be engaged inside the engagement edge 234 -- 225 is formed and the low order barrel wall object 23 and the base 22 have structure which prevents it being engaged mutually, and shifting and moving.

[0027] Furthermore, the asbestos packing 27 which constitutes the shape of an abbreviation C typeface to which the plane view configuration met the square-like profile is put between the clearance part by the side of the periphery of the base 22 and the low order barrel wall object 23, and the open C typeface-like part is arranged so that it may correspond to \*\*\*\*\* 231. It is constituted so that it may prevent that the smoke and gas at the time of combustion flow out of a part for the joint of the base 22 and the low-ranking barrel wall object 23 outside by this asbestos packing 27. It is set as the same outline dimension and a thickness dimension, and the barrel wall object 24 of the medium formed in the shape of a rectangular-head cartridge in height of about 40cm puts between the upper part of the low order barrel wall object 23 the annular asbestos packing 27 formed so that an outline configuration might be in agreement with the square-like barrel wall objects 23 and 24, and is accumulated on it. in addition, the engagement edge 241 which projects to the down side over the perimeter is formed in the bottom rim section of the middle barrel 24, and it engages with this engagement edge 241 -- as -- the rising wood inside of the low order barrel wall object 23 -- the perimeter -- crossing -- engagement convex -- 235 is formed and it has the structure of preventing it being engaged mutually, and shifting and moving.

[0028] Furthermore, the barrel wall object 25 of the high order of the same configuration same dimension puts the asbestos packing 27 of the same configuration as an above-mentioned thing between the upper part of the barrel wall object 24 of a medium, and is accumulated on it. also in this accumulation part, the engagement edge 251 which projects to the down side over the perimeter is formed in the bottom rim section of the high order barrel wall object 25,



and it engages with this engagement edge 251 -- as -- the rising wood inside of the middle barrel wall object 24 -- the perimeter -- crossing -- engagement convex -- 242 is formed and it has the structure of preventing it being engaged mutually, and shifting and moving. The combustion chamber 28 constituted the level difference configuration engaged mutually, and has accomplished with the barrel wall objects 23, 24, and 25 of a total of three high orders on which each equipped with the structure of preventing shifting carelessly and moving, and was accumulated, a medium, and low order.

[0029] The top plate 26 as a top-cover molding object rectangular-head tabular with the condition of putting the asbestos packing 27 of the same configuration as the above-mentioned thing is accumulated on the upper part of the barrel wall object 25 of a high order. the rising wood inside of the high order barrel wall object 25 corresponding to [ the engagement edge 268 which projects to the down side over the perimeter is formed in the bottom rim section of a top plate 26, and ] the inside of this engagement edge 268 -- the perimeter -- crossing -- engagement convex -- 252 is formed and it has the structure of it being engaged mutually, shifting and preventing a motion.

[0030] Opening is carried out to the shape of a square, and the input port 261 of the dust penetrated in the thick direction is equipped with the closing motion lid 263 which equips this dust input port 261 with the level difference section 262 corresponding to the inner hull configuration of input port 261, and fits into it in the vertical direction at the flank before a top plate 26. Moreover, the end face section of the handle 264 which bent the iron bar and was formed is implanted in the top-face center section of the closing motion lid 263. In addition, the closing motion lid 263 consists of an object which has the permeability manufactured from the cement zeolite kneading object, concrete, brick without the usual permeability, etc.

[0031] Opening of the exhaust port 265 penetrated in the thick direction of the vertical direction is carried out, and a flange 267 is formed in that base, and while the base of a chimney stack 266 fixes, after the cure, it is constituted by this exhaust port 265 at the back of a top plate 26 by inserting this flange 267 simultaneously at the time of shaping of a top plate 26 so that it may be fixed to a top plate 26 and one and may be completed. The incinerator 21 constituted as mentioned above can have high permeability in the base 132, the barrel wall objects 14, 15, and 16, and top plate 17 of the base 3 surrounding a combustion chamber 28, and can improve combustion efficiency by leaps and bounds as compared with an old incinerator.

[0032]  
[Function and Effect] The incinerator containing the permeability aggregate of this invention made from a refractory concrete as above Two or more barrel wall objects which surround a combustion chamber and which were accumulated on the base and the base, And by having used mixture of a zeolite and a pumice as coarse aggregate for the top-cover molding object, having added glass fiber, having set up voidage to about 5% or more, and having cast it by making into connector material the cement paste which consists of a refractory concrete Since the open air is easily attracted from [ of a combustion chamber ] all through the zeolite and pumice which constitute a wall surface The hypoxia generated with the incinerator which oxygen is supplied that there is no nonuniformity in all of the dust of a combustion chamber, and consists of the old concrete which does not let air pass at all, The incomplete combustion resulting from this is lessened, generating of smoke and harmful gas is reduced, and it has the excellent description that the incineration time amount of dust can be shortened.

[0033] thus, in the incinerator of this high invention of combustion efficiency Volume of combustion chamber is more greatly [ than the incinerator of the same old size ] securable by having not reduced combustion efficiency and having abolished the grate, even if it did not adopt a grate. From having adopted the zeolite as the coarse aggregate of the outside where it also becomes possible to improve the working efficiency of dust incineration remarkably, and a refractory concrete Since effect on the circumference was lessened or voidage was made into about 7 - 8% the optimal about 5% by being able to acquire the deodorization effectiveness by the zeolite and removing the offensive odor generated with incineration of dust As compared with the usual concrete, it has adiathermic [ very high ], and the trouble by heating of an incinerator external wall surface can be abolished. Moreover, it is expected that can offer an incinerator with high reinforcement, become advantageous in respect of the handling as a product an assembly and an overhaul not only become easy, but, and amplification of need becomes what demonstrates power dramatically from the description on the raw material more nearly lightweight than the usual concrete.

[0034] Since the mixture 30 of a zeolite and a pumice is used as the aggregate of a refractory concrete as shown in the sectional view of the wall 29 which surrounds the combustion chambers 20 and 28 of the incinerators 12 and 21 of drawing 2 especially, with the usual concrete that permeability can be given to the wall surface of combustion chambers 20 and 28, the operation which was not able to be acquired at all shall be first done so rather than anything. This is an operation acquired from a several angstroms - 10A countless cavity and predetermined voidage on the front face of a zeolite 30. Specifically A combustion chamber 20 and the smoke generated by combustion within 28 It goes up

according to a convection-current phenomenon, flows out outside through a chimney stack 176,266, and has the structure where the open air is attracted in a combustion chamber 20 and 28 through the barrel wall section which consists of mixture 30 of a zeolite and a pumice with the negative pressure produced by runoff of this air.

[0035] Since the open air flows only from very small \*\*\*\*\* 31 by which opening was carried out so that what a strong wind blows into the lower part of a body may be avoided in an old incinerator Although combustion efficiency was bad, long duration may be taken to burn all dust, and it changed into the incomplete combustion condition, harmful gas was generated and there was a fault, such as being cheap Since the open air is easily attracted from [ of combustion chambers 20 and 28 ] all through the mixture 30 of the zeolite which constitutes a wall surface, and a pumice, the incinerators 12 and 21 in this invention While lessening the incomplete combustion depended insufficient [ oxygen ] as much as possible, generating of smoke was reduced and it succeeded in shortening the incineration time amount of dust. When a top plate 26 is especially made into the thing of non-permeability, the effectiveness is heightened further further.

[0036] To an old incinerator according to the characteristic structure of the incinerators 12 and 21 of the invention in this application where it was made for all the wall surfaces of combustion chambers 20 and 28 to air to flow also in the indispensable grate By having abolished not only effectiveness but the grate which there shall be [ grate ] no need about it, consequently decreases components mark The excellent effectiveness that it can enlarge about 25% can produce the volume of combustion chambers 20 and 28 rather than the incinerator of the same old size, and the working efficiency of dust incineration can be improved further.

[0037] Since the bases 13 and 22 have the structure where change with the structure where a pars basilaris ossis occipitalis surfaces on the ground, and air flows also from the base part of combustion chambers 20 and 28, very little dust incineration of combustion nonuniformity to the extent that it does not think with an old incinerator is possible. Since the mixture 30 of a countless zeolite and a countless pumice is put together intricately Since the open air will be in the condition of having passed the filter as the crooked ventilation flue is formed and it is shown in drawing 2 , while the air which flowed supplies oxygen effectively, without barring combustion In the old incinerator of adsorbing the offensive odor generated with incineration of dust according to the deodorization effectiveness of a zeolite 30, and deodorizing, the description of the proper whose expectation was not completed at all is demonstrated.

[0038] moreover, from the barrel wall objects 14, 15, 16, 23, 24, and 25 becoming what was formed as predetermined voidage Since connotation became possible suitably about air or water at these opening section, and water was emitted according to change of temperature or a pressure and it has the function which absorbs moisture, while generating the operation which prevents heating of the external wall surface of incinerators 12 and 21 Since the zeolite 30 and the pumice 30 contain in the coarse condition even if it is the case where a cement part carries out thermal expansion As compared with the usual concrete, the concrete which used as coarse aggregate mixture 30 of the outside where generating of a crack becomes what there was and was excellent in endurance, a zeolite, and a pumice [ few ] Are more nearly lightweight than the concrete which used usual sand and ballast as the aggregate. Moreover Incinerators 12 and 21 are divided like two or more barrel wall objects 14, 15, 16, 23, 24, and 25, respectively. Assembly, Since it is constituted possible [ decomposition ], when the sale of purchasers, such as a home center, as goods which bring home themselves and are made is attained, it will become advantageous also in handling [ phase / negotiation ].

[0039] It consists of very new structure which enabled the incinerator of this invention to adopt the zeolite which was not adopted until now as coarse aggregate like the above statement. While realizing the incinerator of characteristic structure when raising the functionality to an incinerator taking advantage of the property of a zeolite at points which were not seen until now, such as the deodorization effectiveness and an adsorption effect of a toxic gas, and improving combustion efficiency moreover As opposed to the waste disposal problems it is especially expected to be from it having been lightweight, having dealt with it, having exceeded to the sex, and having considered as the thing which has still easier manufacture, and which can be offered cheaply to become a technical problem very useful as an incinerator for home use and future further much more big It is expected that it becomes what it is size and the value is evaluated by.

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[Translation done.]

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PRIOR ART

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[Description of the Prior Art] In recent years, city waste disposal problems are big social problems, and many recycle which reuses non-burnable trash, such as an empty can and an empty bottle, as a resource, garbage disposal equipments which enable processing of a kitchen garbage by domestic by utilization of a microorganism etc. are increasingly used in the actual condition which is insufficient of the facilities for refuse disposal. It is in such the actual condition and incineration of the dust for every home using a traditional home incinerator is performed at the home where the city section is left and it lives in a single house. Incineration of such dust is performed using the incinerator made from a refractory concrete, and the incinerator made from a griddle. The incinerator 1 made from a refractory concrete shown in the front view of the incinerator of drawing 6 and the sectional side elevation of the incinerator of drawing 7 mixes the aggregates, such as sand and ballast, to the cement paste made because the concrete components which constitute that body mix water to the alumina cement known as refractory cement, and is created by slushing this freshly mixed concrete into a mold, and recuperating oneself.

[0003] The incinerator 1 to old [ this ] is equipped with the rectangular-head tabular base 2. In the upper part of this base 2 The lower barrel wall object 3 formed in tubed [ which suits the profile configuration of the base 2 ] is laid, and \*\*\*\*\* 31 for raking out the ashes after incineration from the inside of an incinerator 1 is formed in the peripheral surface part corresponding to the front face of this lower barrel wall object 3 by excising a part of joint with the base 2 in the shape of a rectangle. And fitting of the brick lid 41 formed in the rectangle box-like corresponding to the opening configuration of \*\*\*\*\* 31 is carried out to this \*\*\*\*\* 31, the ends of the handle 43 which bent and formed the iron bar in the lateral-surface center section of this brick lid 41 are implanted in it, and the bleeder 42 of a triangle-like cross section is formed in the central lower part. Inside the lower barrel wall object 3 with which such a circumferential wall was formed, it carries out bending two or more iron bars etc., the grate 44 formed by carrying out combination welding is inserted in the shape of a grid, it is, and the aeration volume section 71 for oxygen supply is constituted in the lower part of a combustion chamber 7.

[0004] The CHUBU ENGINEERING CORPORATION barrel wall object 5 with which the plane view configuration was formed in the same configuration as the lower barrel wall object 3 is laid in the upper part of the lower barrel wall object 3 by the laminating condition, and the up barrel wall object 6 of the same configuration as the CHUBU ENGINEERING CORPORATION barrel wall object 5 is further accumulated on the upper part of the CHUBU ENGINEERING CORPORATION barrel wall object 5. In this way, the top plate 8 is formed in the upper part of the combustion chamber 7 of the incinerator 1 constituted by having accumulated the barrel wall objects 3, 5, and 6 on three steps, the dust input port 82 penetrated in the thickness direction which is the vertical direction ahead of this top plate 8 is formed, and this dust input port 82 is equipped with the closing motion lid 9. It is covered the structure of the level difference section 92 being formed in a bottom edge, hiding a part into dust input port 82, and preventing a slipping motion with the closing motion lid 9, and the handle 93 which bent the iron bar with which the end face section was laid underground, and was formed is formed in the up center section. Furthermore, the exhaust port 83 is formed in the back of a top plate 8 so that it may penetrate in the vertical direction. In this exhaust port 83, the chimney stack 10 extended up has fixed the flange 101 formed in the base in the condition of laying under the thick circles of a top plate 8. In addition, the handle 43 which fixed on the above-mentioned brick lid 4, the handle 93 prepared in the closing motion lid 9, and the flange 101 prepared in the chimney stack 10 have fixed in one by being fabricated in the condition of having been inserted to the predetermined location, in case each base slushes freshly mixed concrete into a mold.

[0005] In incinerating dust using the incinerator 1 to old [ which was constituted as mentioned above ], the dust which moves the closing motion lid 9 and is first incinerated from dust input port 82 is thrown in on a grate 44, and it burns as a pilot flame, cheap wastepaper etc. is lit, and it supplies this. It consists of air flowing through the bleeder 42 of the brick lid 4 from lower \*\*\*\*\* 31, and supplying oxygen in a combustion chamber 7 so that combustion may be urged.

The burning dust is held by the grate 44 in the condition of having risen to surface in the halfway section of a combustion chamber 7, as shown by the arrow head in drawing 7 through the aeration volume section 71, it is constituted so that air may spread round the whole, and the smoke generated by combustion of dust passes a chimney stack 10, it flows into the outside of an incinerator 1 and is exhausted.

[0006] Therefore, although it extracts and removes the brick lid 4 from \*\*\*\*\* 31 and it is made to make the air of a large quantity flow when the old incinerator 1 is lit in the condition of throwing in much dust at once and filling a combustion chamber 7 since it needs much oxygen for combustion. Thus, even if it makes the amount of supply of air increase, the dust in a combustion chamber 7 may be in an incomplete combustion condition. When smoke, such as nonflammable gas, does not occur mostly, or efficient dust incineration of fire going out on the way etc. is not able to be performed and the bleeder part of \*\*\*\*\* 31 grade was enlarged, it was what new inconvenience, such as smoke flowing out of this part, or a wind flowing, and extinguishing fire, produces.

[0007] Thus, the artificer to whom incinerating much dust efficiently paid its attention to the fault of the incinerator 1 of the difficult actual condition at once. The time amount which dust incineration takes by improving this to what burns efficiently can be shortened, and an incineration activity can be easily done also in a busy life. Furthermore, research of the efficient incinerator 1 which can control generating of the harmful gas by incomplete combustion etc. by efficient combustion. While starting development and passing easily the air which flows into the wall surface of a combustion chamber 7 inside as a result of various trial-and-error. The conclusion that it is a very effective policy developing the wall surface which prevents that nonflammable gas, a smell, etc. flow out outside, and makes a good combustion condition is reached, and it succeeds in implementation-ization of the incinerator made from a refractory concrete which added at last the new engine performance which was not seen to the old incinerator. Suppose that the configuration is explained in full detail with reference to a drawing with the example representing the incinerator containing the completely new permeability aggregate completed by applying to below the concrete with which the invention-in-this-application person succeeded in development at last made from a refractory concrete.

[0008]

[Elements of the Invention] The incinerator containing the permeability aggregate of this invention made from a refractory concrete makes the following configurations the summary fundamentally so that I may be clearly understood also from the example representing this invention shown in a drawing. Namely, connect the glass fiber of the weight section which serves as about 0.5 - 1% of rate to the coarse aggregate which becomes as the abbreviation same weight section in a zeolite and a pumice, and it adds as reinforcing materials. Knead the cement paste which consists of refractory cement, and the block molding object of the porosity used as about 5% of voidage is formed. It is the incinerator which constitutes a permeability tubed combustion chamber body combining these block molding object, carries out opening of dust input port and the chimney-stack opening to the upper part of a permeability tubed combustion chamber body, and comes to form \*\*\*\*\* in the lower part.

[0009] In addition, by building reinforcement into a block molding object if needed, reinforcement can be improved and endurance can be raised. moreover, the configuration of reinforcement can secure good endurance with having constitute so that what construct two or more reinforcement in the condition of accomplish the shape of a grid inside the block molding object which form a tubed combustion chamber, and intersect a lengthwise direction and a hoop direction, and a continuum like a wire gauze might be made inherent in the thick section etc. As the concrete blending ratio of coal of the zeolite of a block molding object, a pumice, glass fiber, and refractory cement. The zeolite 30 weight section, the pumice 30 weight section, the glass fiber 3 weight section, The optimal, when considering as the refractory-cement 40 weight section raises fire resistance efficiency and endurance, although it is necessary to secure at least 5% or more of voidage in order to supply air required for a combustion chamber, the voidage of a block molding object. By setting it as about 7 - 8% of these voidage, it is checking that the permeability optimal for combustion can be secured now.

[0010] As a more concrete configuration, in furthermore, more [ a little ] rates than a zeolite and this zeolite. Or the glass fiber adjusted to the weight section of about 0.5 - 1% of rate is added to the coarse aggregate which comes to mix the pumice of the abbreviation same weight section. Knead the cement paste which consists of refractory cement, and the short tubed block molding object of the porosity which serves as about 5% of voidage at least is formed. A permeability tubed combustion chamber body, and nothing and a short tubed block molding object are another objects combining a these short tubed block molding object. The above-mentioned short tubed block molding object is another object again in the upper part of this permeability tubed combustion chamber body about the top-cover molding object which has dust input port and chimney-stack opening, and it can consider as the incinerator which comes to combine with the lower part the short tubed precast concrete armor unit molding object which has \*\*\*\*\*.

[0011] It shall form in the thing of the product [ top plate / the outside where it is desirable to divide into the size which

is not necessarily limited to it although about 2-4 steps are suitable for the laminating number of stages of a short tubed block, and is suitable for haulage if needed, and ] made from non-permeability concrete, and should be made to make good the inflow of stability and the air which strengthens and flows into a combustion chamber for the flue gas suction force from a chimney stack. In addition, lidding in \*\*\*\*\* or the input port of dust is possible, and, of course, closing motion accommodation of a lid can be performed according to the combustion condition of dust, or the external weather. The configuration of the incinerator included by this invention carries out to enabling it to grasp more concretely and clearly by explaining hereafter the example shown in a drawing in full detail.

[0012]

[Example 1] First, an example of the incinerator which consists of most typical structure of this invention is shown in the drawing 1 perspective view. This fundamental incinerator 12 is constituted as shown in the front view of the incinerator 12 of drawing 3, and the sectional side elevation of the incinerator 12 of drawing 4, and that refractory-concrete wall surface is formed with the cross-section structure shown in drawing 2. An incinerator 12 is equipped with the top plate 17 as the base 13, the barrel wall objects 14, 15, and 16, and a top-cover molding object, is constituted, and all of these main parts make fireproof cement paste connector material, and it consists of the refractory concrete which mixed the pumice with the zeolite as the aggregate.

[0013] As for a zeolite and a pumice, as coarse aggregate of the barrel wall objects 14, 15, and 16 formed in the grain size of about 10-40mm, and the thickness of 100-150mm, it is desirable to consider as an about 15-30mm thing. A zeolite is one of the very high mineral resources of a few self-sufficiency rates in our country. Although it is going to use the property effectively as an incinerator since it has innumerable a cavity of several angstroms - 10A and an operation of moisture absorption and bleedoff of moisture, absorption of gas, the deodorization effectiveness, etc. is done so by change of environments, such as temperature of the external world, and an atmospheric pressure, in the crystal structure Since decomposition by heat advances in itself, concomitant use by the predetermined rate with a pumice becomes very important. 40-kind weakness, such as natural, for example, the zeolite from Yamagata Sasaya etc., is reported, a composite thing goes up also to hundreds of kinds, and, as for the zeolite with the above unique physical properties, especially its baking zeolite is effective.

[0014] While mixing with grain size, such as abbreviation, and the pumice of the abbreviation same weight section and using as coarse aggregate the zeolite which adjusted grain size as mentioned above, the glass fiber of the rate of about 0.5 to 1 weight section extent is added as reinforcing materials to this coarse aggregate, and voidage forms after that the block molding object of the porosity it was made to become about 7 - 8% the optimal about at least 5% with the cement paste which consists of refractory cement. In addition, what is necessary is for refractory cement to accept a season, a weather condition, etc., and for a value to choose and just to adopt a water cement ratio from within the limits around 40 - 60% suitably, before and after 50% of abbreviation, using Portland blast furnace cement excellent in alumina cement or thermal resistance. Moreover, as the concrete blending ratio of coal of the above-mentioned zeolite, a pumice, glass fiber, and refractory cement, ideal reinforcement, endurance, and thermal resistance are securable by setting up with the zeolite 30 weight section, the pumice 30 weight section, the glass fiber 3 weight section, and the refractory-cement 40 weight section.

[0015] Moreover, the voidage of the opening section of the block molding objects 12-17 If it is desirable to set up to about 7 - 8% and it raises voidage across this range, while it will become quite difficult to acquire sufficient endurance as an incinerator 12 used at ordinary homes The attraction effectiveness of a chimney stack can weaken, the problem that smoke will be discharged will be produced from these opening section in response to the effect of the flow of the open air, and it is not desirable. Furthermore, in order to supply sufficient air needed for the perfect combustion of dust at a combustion chamber, an invention-in-this-application person is already check ending about it being required to secure at least 5% or more of voidage.

[0016] Furthermore, although high reinforcement is secured by having added the glass fiber which is not illustrated into the block molding object 12 - 17, as shown in the sectional view shown in drawing 2, endurance can be further improved by reinforcing with the reinforcing materials who constructed the reinforcement which is not illustrated outside wire gauze 31a or reinforcement in the shape of a grid near [ thick ] a center section. In addition, in case cement paste is made, if there is need, the cement paste colored the color which carries out optimum dose mixing beforehand at cement, and asks for the well-known coloring agent for cement can also be used.

[0017] Like the above, it is the top plate 17 as the base 13, the barrel wall objects 14, 15, and 16, and a top-cover molding object, respectively, and the produced block molding object kneads all the above-mentioned ingredients, it is slushed into a cement pattern and manufactured as a main component part of an incinerator 12 by fabricating and recuperating oneself. An outline diameter is formed in about 90cm, and the base 13 is formed in the configuration in which is equipped with the leg 131 and a base 132 surfaces from the ground. Under the present circumstances, the leg

131 For example, it is formed in the protruding line of the shape of high [ , such as having projected downward in the periphery partial lower part of the base 13 formed circularly, ], the free passage opening 133 is formed in anterior part, and it changes, and has the structure of securing the wall surface in which aeration is possible in the vertical direction, in the center section of the above-mentioned base 132 through this free passage opening 133.

[0018] Moreover, the thickness dimension which forms the external wall surface corresponding to the outline configuration of the plane view circle configuration of the base 13 is formed in tubed [ which is about 10cm ], and the low-ranking barrel wall object 14 is set as height of about 40cm, and is formed in the front lower part by \*\*\*\*\*'s 141 constituting the shape of a rectangle and excision disconnection being carried out. The closeout block 142 which was formed in \*\*\*\*\* 141 so that an opening configuration might be closed, and was formed from the object which has the permeability manufactured from the cement paste kneading object containing a zeolite, a pumice, etc. or concrete without the usual permeability, brick, etc. can be equipped with a handle 143, and can be established, and the ashes deposited on the base 132 of the base 13 can be raked out now.

[0019] Between the margo-inferior section and the base 13, the asbestos packing 18 to which a plane view configuration constitutes the shape of an abbreviation C typeface is put, and the open C typeface-like part is arranged so that it may correspond to \*\*\*\*\* 141. It is constituted so that it may prevent that the smoke and gas at the time of combustion flow out of a part for the joint of the base 13 and the low-ranking barrel wall object 14 outside by this asbestos packing 18. It is set as the same outer diameter and this thickness dimension, and the barrel wall object 15 of the medium formed in the shape of a cylindrical shape in height of about 40cm puts between the upper part of the low order barrel wall object 14 the annular asbestos packing 19 formed so that an outer diameter and a bore might be in agreement with the barrel wall objects 14 and 15, and is accumulated on it. Furthermore, the barrel wall object 16 of the high order of the same configuration same dimension puts the asbestos packing 19 of the same configuration as an above-mentioned thing between the upper part of the barrel wall object 15 of a medium, and is accumulated on it, and the combustion chamber 20 is formed with the barrel wall objects 14, 15, and 16 of a total of three high orders, a medium, and low order.

[0020] The top plate 17 as a disc-like top-cover molding object is accumulated on the upper part of the barrel wall object 16 of a high order in the condition of putting the asbestos packing 19 of the same configuration as the above-mentioned thing. To the flank before this top plate 17 Opening is carried out to the shape of a square, and the input port 171 of the dust penetrated in the thick direction is equipped with the closing motion lid 173 which equips this dust input port 171 with the level difference section 172 corresponding to the inner hull configuration of input port 171, and fits into it in the vertical direction. The end face section of the handle 174 which bent the iron bar and was formed is implanted in the top-face center section of the closing motion lid 173. This closing motion lid 173 consists of an object which has the permeability manufactured from the cement paste kneading object containing a zeolite and a pumice, concrete, brick without the usual permeability, etc.

[0021] Opening of the exhaust port 175 penetrated in the thick direction of the vertical direction is carried out to the back of a top plate 17, and the base of the chimney stack 176 formed by carrying out sheet metal work of the griddle has fixed in this exhaust port 175. The flange 177 for immobilization is formed in the base of this chimney stack 176, and by inserting this flange 177 simultaneously at the time of shaping of a top plate 17, after the cure, it is constituted so that it may be fixed to a top plate 17 and one and may be completed.

[0022] Since the incinerator 12 constituted as mentioned above has high permeability in the base 132, the barrel wall objects 14, 15, and 16, and top plate 17 of the base 13 surrounding a combustion chamber 20, even if it is the case where the grate which was indispensable for the old incinerator is abolished, it can improve combustion efficiency by leaps and bounds. In addition, by considering as the product made from non-permeability concrete which produced only the top plate 17 as a top-cover molding object using the aggregate of the different usual refractory cement (alumina cement or Portland blast furnace cement) and the sand from other components, or ballast As a result of being able to lose the runoff close of the open air from a top plate 17, especially runoff, the flame accompanied by the flue gas going up It will be chiefly drawn in by the chimney stack 176, the attraction effectiveness will increase, installation of the open air from the barrel wall objects 14, 15, and 16 is promoted, the supply of oxygen to the interior of an incinerator is stabilized, and it becomes possible to raise combustion efficiency.

[0023]

[Example 2] Other examples of the incinerator of this invention shown in the sectional side elevation of the incinerator 21 of drawing 5 The whole is formed in rectangle box-like and changes. The incinerator 21 A plane view configuration is equipped with the base 22 formed in the shape of a square, and the top plate 26 as the barrel wall objects 23, 24, and 25 accumulated on this base 22, and a top-cover molding object, and changes. These main parts add glass fiber to the coarse aggregate which carried out almost same amount mixing of a zeolite and the pumice, and cast and produce the kneading object which made connector material further the cement paste which consists of refractory cement.



[0024] the mixing ratio of each ingredient of these block molding objects 21-26 -- rates are the zeolite 30 weight section, the pumice 30 weight section, the glass fiber 3 weight section, and the alumina cement 40 weight section as refractory cement, and after kneading on this condition, specifically, they are cast so that voidage of a molding object may be made into about 7 - 8%. After mixing the zeolite and pumice which adjusted grain size by the above-mentioned ratio, carrying out optimum dose addition of the glass fiber and mixing, it kneads with fireproof cement paste, and it slushes into the mold of the base 22, the barrel wall objects 23, 24, and 25, and a top plate 26, and the main component parts of the incinerator 21 of 7 - 8% of voidage are manufactured by fabricating and recuperating oneself. In addition, other well-known refractory cement, such as Portland blast furnace cement, can also already be used for refractory cement. Moreover, a season, the weather condition for every district, etc. can be accepted, and a value can be suitably chosen and used for the water cement ratio in the range around 40 - 60%.

[0025] The base 22 is formed by plane view in the shape of [ whose one side is about 90cm ] a square, and it is formed in the configuration in which is equipped with the leg 221 and a base 223 surfaces from the ground. The leg 221 It is formed in the protruding line which projected downward in the periphery partial lower part of the base 22, the free passage opening 224 is formed all around, and it changes, and has the structure of securing the structure in which aeration is possible in the vertical direction, in the center section of the above-mentioned base 223 through these free passage openings 224. Moreover, the thickness dimension which forms the external wall surface corresponding to the outline configuration of the shape of a plane view square of the base 22 is formed in tubed [ which is about 10cm ], and the low-ranking barrel wall object 23 is set as height of about 40cm, and is formed in the front lower part by \*\*\*\*\*s 231 constituting the shape of a rectangle and excision disconnection being carried out.

[0026] The closeout block 232 which was formed so that an opening configuration might be closed, and was formed from the object which has the permeability manufactured from the cement zeolite kneading object or concrete without the usual permeability, brick, etc. can equip \*\*\*\*\* 231 with a handle 233, and can be formed in it, and the ashes deposited on the base 223 of the base 22 can be raked out now from this \*\*\*\*\* 231. The convex engagement edge 234 where the periphery section projects is formed in the margo-inferior section of the low order barrel wall object 23 over the perimeters other than the part corresponding to \*\*\*\*\* 231. the engagement convex which it projects and makes into the upper part of the base 22 corresponding to the inside of this engagement edge 234 so that it may be engaged inside the engagement edge 234 -- 225 is formed and the low order barrel wall object 23 and the base 22 have structure which prevents it being engaged mutually, and shifting and moving.

[0027] Furthermore, the asbestos packing 27 which constitutes the shape of an abbreviation C typeface to which the plane view configuration met the square-like profile is put between the clearance part by the side of the periphery of the base 22 and the low order barrel wall object 23, and the open C typeface-like part is arranged so that it may correspond to \*\*\*\*\* 231. It is constituted so that it may prevent that the smoke and gas at the time of combustion flow out of a part for the joint of the base 22 and the low-ranking barrel wall object 23 outside by this asbestos packing 27. It is set as the same outline dimension and a thickness dimension, and the barrel wall object 24 of the medium formed in the shape of a rectangular-head cartridge in height of about 40cm puts between the upper part of the low order barrel wall object 23 the annular asbestos packing 27 formed so that an outline configuration might be in agreement with the square-like barrel wall objects 23 and 24, and is accumulated on it. in addition, the engagement edge 241 which projects to the down side over the perimeter is formed in the bottom rim section of the middle barrel 24, and it engages with this engagement edge 241 -- as -- the rising wood inside of the low order barrel wall object 23 -- the perimeter -- crossing -- engagement convex -- 235 is formed and it has the structure of preventing it being engaged mutually, and shifting and moving.

[0028] Furthermore, the barrel wall object 25 of the high order of the same configuration same dimension puts the asbestos packing 27 of the same configuration as an above-mentioned thing between the upper part of the barrel wall object 24 of a medium, and is accumulated on it. also in this accumulation part, the engagement edge 251 which projects to the down side over the perimeter is formed in the bottom rim section of the high order barrel wall object 25, and it engages with this engagement edge 251 -- as -- the rising wood inside of the middle barrel wall object 24 -- the perimeter -- crossing -- engagement convex -- 242 is formed and it has the structure of preventing it being engaged mutually, and shifting and moving. The combustion chamber 28 constituted the level difference configuration engaged mutually, and has accomplished with the barrel wall objects 23, 24, and 25 of a total of three high orders on which each equipped with the structure of preventing shifting carelessly and moving, and was accumulated, a medium, and low order.

[0029] The top plate 26 as a top-cover molding object rectangular-head tabular with the condition of putting the asbestos packing 27 of the same configuration as the above-mentioned thing is accumulated on the upper part of the barrel wall object 25 of a high order. the rising wood inside of the high order barrel wall object 25 corresponding to

[ the engagement edge 268 which projects to the down side over the perimeter is formed in the bottom rim section of a top plate 26, and ] the inside of this engagement edge 268 -- the perimeter -- crossing -- engagement convex -- 252 is formed and it has the structure of it being engaged mutually, shifting and preventing a motion.

[0030] Opening is carried out to the shape of a square, and the input port 261 of the dust penetrated in the thick direction is equipped with the closing motion lid 263 which equips this dust input port 261 with the level difference section 262 corresponding to the inner hull configuration of input port 261, and fits into it in the vertical direction at the flank before a top plate 26. Moreover, the end face section of the handle 264 which bent the iron bar and was formed is implanted in the top-face center section of the closing motion lid 263. In addition, the closing motion lid 263 consists of an object which has the permeability manufactured from the cement zeolite kneading object, concrete, brick without the usual permeability, etc.

[0031] Opening of the exhaust port 265 penetrated in the thick direction of the vertical direction is carried out, and a flange 267 is formed in that base, and while the base of a chimney stack 266 fixes, after the cure, it is constituted by this exhaust port 265 at the back of a top plate 26 by inserting this flange 267 simultaneously at the time of shaping of a top plate 26 so that it may be fixed to a top plate 26 and one and may be completed. The incinerator 21 constituted as mentioned above can have high permeability in the base 132, the barrel wall objects 14, 15, and 16, and top plate 17 of the base 3 surrounding a combustion chamber 28, and can improve combustion efficiency by leaps and bounds as compared with an old incinerator.

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**EFFECT OF THE INVENTION**

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[Function and Effect] The incinerator containing the permeability aggregate of this invention made from a refractory concrete as above Two or more barrel wall objects which surround a combustion chamber and which were accumulated on the base and the base, And by having used mixture of a zeolite and a pumice as coarse aggregate for the top-cover molding object, having added glass fiber, having set up voidage to about 5% or more, and having cast it by making into connector material the cement paste which consists of a refractory concrete Since the open air is easily attracted from [ of a combustion chamber ] all through the zeolite and pumice which constitute a wall surface The hypoxia generated with the incinerator which oxygen is supplied that there is no nonuniformity in all of the dust of a combustion chamber, and consists of the old concrete which does not let air pass at all, The incomplete combustion resulting from this is lessened, generating of smoke and harmful gas is reduced, and it has the excellent description that the incineration time amount of dust can be shortened.

[0033] thus, in the incinerator of this high invention of combustion efficiency Volume of combustion chamber is more greatly [ than the incinerator of the same old size ] securable by having not reduced combustion efficiency and having abolished the grate, even if it did not adopt a grate. From having adopted the zeolite as the coarse aggregate of the outside where it also becomes possible to improve the working efficiency of dust incineration remarkably, and a refractory concrete Since effect on the circumference was lessened or voidage was made into about 7 - 8% the optimal about 5% by being able to acquire the deodorization effectiveness by the zeolite and removing the offensive odor generated with incineration of dust As compared with the usual concrete, it has adiathermic [ very high ], and the trouble by heating of an incinerator external wall surface can be abolished. Moreover, it is expected that can offer an incinerator with high reinforcement, become advantageous in respect of the handling as a product an assembly and an overhaul not only become easy, but, and amplification of need becomes what demonstrates power dramatically from the description on the raw material more nearly lightweight than the usual concrete.

[0034] Since the mixture 30 of a zeolite and a pumice is used as the aggregate of a refractory concrete as shown in the sectional view of the wall 29 which surrounds the combustion chambers 20 and 28 of the incinerators 12 and 21 of drawing 2 especially, with the usual concrete that permeability can be given to the wall surface of combustion chambers 20 and 28, the operation which was not able to be acquired at all shall be first done so rather than anything. This is an operation acquired from a several angstroms - 10A countless cavity and predetermined voidage on the front face of a zeolite 30. Specifically A combustion chamber 20 and the smoke generated by combustion within 28 It goes up according to a convection-current phenomenon, flows out outside through a chimney stack 176,266, and has the structure where the open air is attracted in a combustion chamber 20 and 28 through the barrel wall section which consists of mixture 30 of a zeolite and a pumice with the negative pressure produced by runoff of this air.

[0035] Since the open air flows only from very small \*\*\*\*\* 31 by which opening was carried out so that what a strong wind blows into the lower part of a body may be avoided in an old incinerator Although combustion efficiency was bad, long duration may be taken to burn all dust, and it changed into the incomplete combustion condition, harmful gas was generated and there was a fault, such as being cheap Since the open air is easily attracted from [ of combustion chambers 20 and 28 ] all through the mixture 30 of the zeolite which constitutes a wall surface, and a pumice, the incinerators 12 and 21 in this invention While lessening the incomplete combustion depended insufficient [ oxygen ] as much as possible, generating of smoke was reduced and it succeeded in shortening the incineration time amount of dust. When a top plate 26 is especially made into the thing of non-permeability, the effectiveness is heightened further further.

[0036] To an old incinerator according to the characteristic structure of the incinerators 12 and 21 of the invention in this application where it was made for all the wall surfaces of combustion chambers 20 and 28 to air to flow also in the indispensable grate By having abolished not only effectiveness but the grate which there shall be [ grate ] no need about

it, consequently decreases components mark The excellent effectiveness that it can enlarge about 25% can produce the volume of combustion chambers 20 and 28 rather than the incinerator of the same old size, and the working efficiency of dust incineration can be improved further.

[0037] Since the bases 13 and 22 have the structure where change with the structure where a pars basilaris ossis occipitalis surfaces on the ground, and air flows also from the base part of combustion chambers 20 and 28, very little dust incineration of combustion nonuniformity to the extent that it does not think with an old incinerator is possible. Since the mixture 30 of a countless zeolite and a countless pumice is put together intricately Since the open air will be in the condition of having passed the filter as the crooked ventilation flue is formed and it is shown in drawing 2 , while the air which flowed supplies oxygen effectively, without barring combustion In the old incinerator of adsorbing the offensive odor generated with incineration of dust according to the deodorization effectiveness of a zeolite 30, and deodorizing, the description of the proper whose expectation was not completed at all is demonstrated.

[0038] moreover, from the barrel wall objects 14, 15, 16, 23, 24, and 25 becoming what was formed as predetermined voidage Since connotation became possible suitably about air or water at these opening section, and water was emitted according to change of temperature or a pressure and it has the function which absorbs moisture, while generating the operation which prevents heating of the external wall surface of incinerators 12 and 21 Since the zeolite 30 and the pumice 30 contain in the coarse condition even if it is the case where a cement part carries out thermal expansion As compared with the usual concrete, the concrete which used as coarse aggregate mixture 30 of the outside where generating of a crack becomes what there was and was excellent in endurance, a zeolite, and a pumice [ few ] Are more nearly lightweight than the concrete which used usual sand and ballast as the aggregate. Moreover Incinerators 12 and 21 are divided like two or more barrel wall objects 14, 15, 16, 23, 24, and 25, respectively. Assembly, Since it is constituted possible [ decomposition ], when the sale of purchasers, such as a home center, as goods which bring home themselves and are made is attained, it will become advantageous also in handling [ phase / negotiation ].

[0039] It consists of very new structure which enabled the incinerator of this invention to adopt the zeolite which was not adopted until now as coarse aggregate like the above statement. While realizing the incinerator of characteristic structure when raising the functionality to an incinerator taking advantage of the property of a zeolite at points which were not seen until now, such as the deodorization effectiveness and an adsorption effect of a toxic gas, and improving combustion efficiency moreover As opposed to the waste disposal problems it is especially expected to be from it having been lightweight, having dealt with it, having exceeded to the sex, and having considered as the thing which has still easier manufacture, and which can be offered cheaply to become a technical problem very useful as an incinerator for home use and future further much more big It is expected that it becomes what it is size and the value is evaluated by.

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[Translation done.]

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DESCRIPTION OF DRAWINGS

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[Brief Description of the Drawings]

A drawing shows some the typical examples and the conventional examples which embodied the technical thought of the incinerator of this invention.

[Drawing 1] It is the perspective view showing the incinerator included by this invention.

[Drawing 2] It is the sectional view of the wall surface of a combustion chamber.

[Drawing 3] It is the front view of an incinerator.

[Drawing 4] It is the sectional side elevation of an incinerator.

[Drawing 5] It is the sectional side elevation showing another incinerator included by this invention.

[Drawing 6] It is the front view showing the conventional incinerator.

[Drawing 7] It is the sectional side elevation of the conventional incinerator.

[Description of Notations]

12 Incinerator

13 Base

131 \*\* Leg

132 \*\* Base

133 \*\* Free Passage Opening

14 Low-ranking Barrel Wall Object

141 \*\* \*\*\*\*\*

142 \*\* Closeout Block

143 \*\* Handle

15 Barrel Wall Object of Medium

16 Barrel Wall Object of High Order

17 Top Plate (Top-Cover Molding Object)

171 \*\* Input Port of Dust

172 \*\* Level Difference Section

173 \*\* Closing Motion Lid

174 \*\* Handle

175 \*\* Exhaust Port

176 \*\* Chimney Stack

177 \*\* Flange

18 C Character-like Asbestos Packing

19 Annular Asbestos Packing

20 Combustion Chamber

21 Incinerator

22 Base

221 \*\* Leg

223 \*\* Base

224 \*\* Free Passage Opening

225 \*\* Engagement Convex

23 Low-ranking Barrel Wall Object

231 \*\* \*\*\*\*\*

232 \*\* Closeout Block

233 \*\* Handle  
234 \*\* Engagement Edge  
235 \*\* Engagement Convex  
24 Barrel Wall Object of Medium  
241 \*\* Engagement Edge  
242 \*\* Engagement Convex  
25 Barrel Wall Object of High Order  
251 \*\* Engagement Edge  
252 \*\* Engagement Convex  
26 Top Plate (Top-Cover Molding Object)  
261 \*\* Input Port of Dust  
262 \*\* Level Difference Section  
263 \*\* Closing Motion Lid  
264 \*\* Handle  
265 \*\* Exhaust Port  
266 \*\* Chimney Stack  
267 \*\* Flange  
268 \*\* Engagement Edge  
27 Asbestos Packing  
28 Combustion Chamber  
29 Wall of Combustion Chamber  
30 Mixture of Zeolite and Pumice (Coarse Aggregate)  
31a Wire gauze (reinforcement)

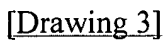
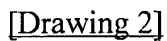
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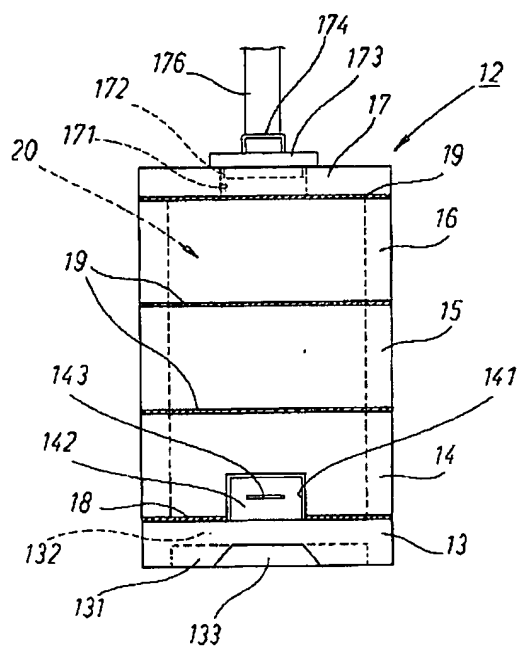
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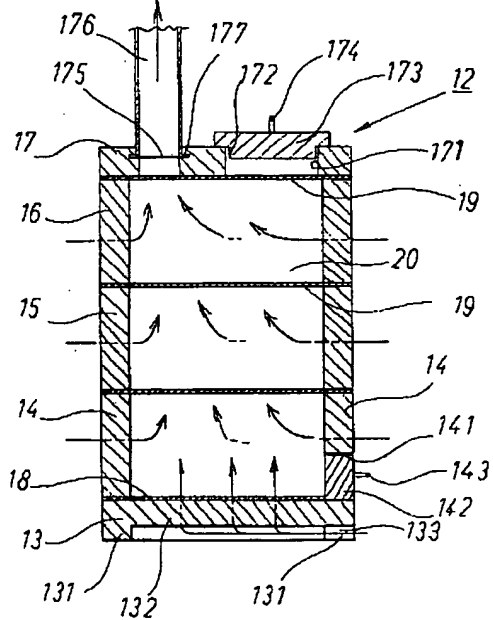
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[Drawing 1]

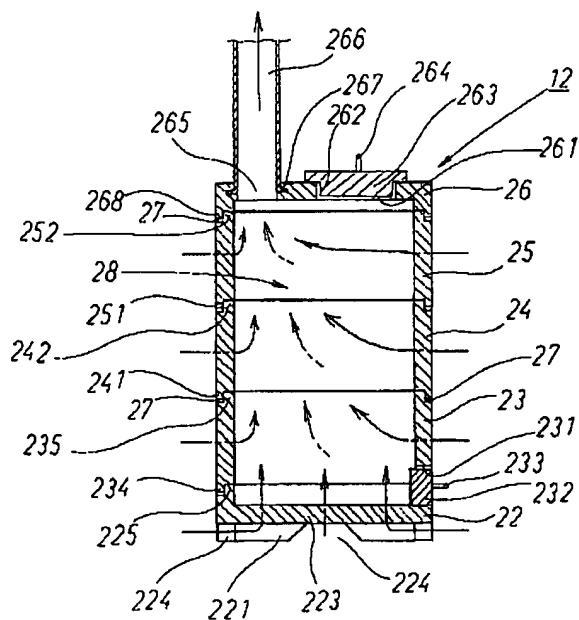




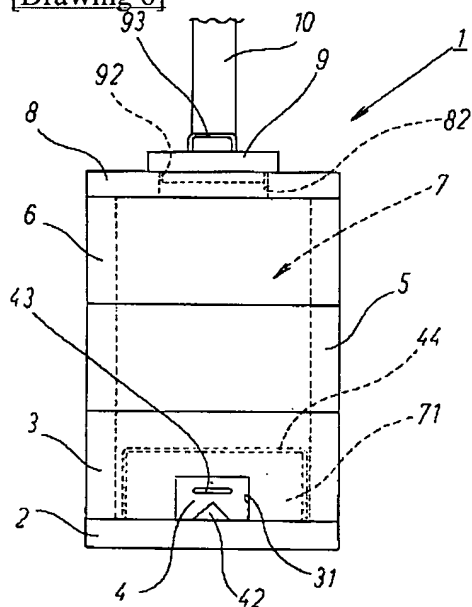
[Drawing 4]



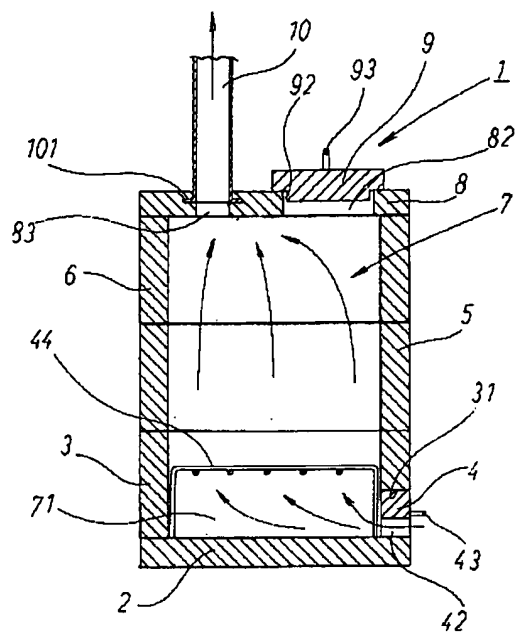
[Drawing 5]



[Drawing 6]



[Drawing 7]



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